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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CORDERO GARCIA, MARCELA M	
ART UNIT	**PAPER NUMBER**
1654	

MAIL DATE	DELIVERY MODE
10/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,082	CRUZ, ANTONIO	
	Examiner	Art Unit	
	Marcela M. Cordero Garcia	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *39-41 and 63-65* is/are pending in the application.

4a) Of the above claim(s) *65* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *39-41,63 and 64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *Notice to Comply*.

DETAILED ACTION

This Office Action is in response to the reply received on May 14, 2007.

Claims 39-41 and new claims 63-65 are pending in the application. Claims 39-41 were amended to depend upon new claim 63.

Any rejection from the previous office action, which is not restated here, is withdrawn. Examiner thanks Applicant for pointing out that there was a typo in the heading of the 103(a) rejection, and confirms that, as the statute and format of the rejection indicated, it was a 103(a) rejection.

For the art rejection below, please note that the sequence of gastrin 17 (Leu) [also known as gastrin 17] has the following sequence: pGlu-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Leu-Asp-Phe-NH_2 as evidenced by Sigma Aldrich catalog [http://www.sigmaaldrich.com/catalog/search/ProductDetail?ProdNo=G9145&Brand=SIGMA, accessed online 11/1/06].

Applicant's original election of species was (human serum albumin)-Glp-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Leu-Asp-Phe, which does not read upon the instantly amended claims. The search was therefore extended and the species (human serum albumin)-Cys-gastrin-17 (2-17) wherein gastrin 17 (2-17) is Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Leu-Asp-Phe-NH_2; m is zero and X is Gly-

Pro-Trp-Leu-Glu-Glu-Glu-Glu-Ala was found. Claims 39-41 and 63-64 are readable thereon.

Claims 39-41 and 63-64 are presented for examination on the merits. Claim 65 is withdrawn as drawn to a non-elected species.

Sequence Compliance

Applicant is advised that the application is not in compliance with 37 CFR §§ 1.821-1.825.

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR § 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR §§ 1.821-1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures. Applicant must comply with the requirements of the sequence rules (37 CFR §§ 1.821- 1.825) in order to completely respond to this office action.

Specifically, no sequence listing / CRF have been provided which includes the amino acid sequences presented e.g., page 2, lines 26-27; page 39, lines 1-2 and claim 63 in order to satisfy the sequence rules requirements, Applicant needs to provide an amendment to the instant claims and specification to include reference to the appropriate "SEQ ID NO:".

In case of any new sequences not properly identified in the instant specification, Applicant is required to provide a substitute computer readable form (CRF) copy of a "Sequence Listing" which includes all of the sequences that are present in the instant application and encompassed by these rules, a new or substitute paper copy of that "Sequence Listing", an amendment directing the entry of that paper copy into the

specification, and a statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. § 1.821(e) or 1.821(f) or 1.821(g) or 1.825(d). The instant specification will also need to be amended so that it complies with 37 C.F.R. § 1.821(d) which requires a reference to a particular sequence identifier (SEQ ID NO:) be made in the specification and claims wherever a reference is made to that sequence. For rules interpretation Applicant may call (571) 272-2533. See M.P.E.P. 2422.04.

Please direct all replies to the United States Patent and Trademark Office via one (1) of the following:

1. Electronically submitted through EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, EFS Submission User Manual - ePave)

2. US Postal Service:
Commissioner for Patents
PO Box 22313-1450
Alexandria, VA 22313-1450

3. Hand carry, Federal Express, United Parcel Service, or other delivery service:
U.S. Patent and Trademark Office
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401 Dulany Street
Alexandria, VA 22314

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 39-41 and 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brand (US 6,992,060) in view of Frehel et al. (US 5,189,049) in view of Bridon et al. (US 6,329,336) and in view of Gevas et al. (US 5,023,077).

Brand teaches administering gastrin 17 (Leu15) and other gastrin/CCK receptor ligands including gastrin 17 derivatives, active analogs and fragments of gastrin 17 (e.g., column 7, lines 14-44) to treat diabetes. Brand teaches the limitations of claim 39: --measuring a physiological indicator of islet neogenesis-- (e.g., column 9, lines 23-30, column 10, lines 38-61, Figs 1-5, 7); of claim 40: --measuring fasting blood glucose-- (e.g., Figs. 6 and 8) and of claim 41 --decreasing insulin dependency-- (e.g., Fig. 7) and stimulating the expression of the hormone insulin (e.g., Example 2). Please note that the active step of the base claim 63 is "administrating a gastrin compound", which does not require the subject to necessarily have hyperglycemia but it reads upon administration of the compound to any subject. Brand does not teach the gastrin 17 fragment being gastrin 2-17.

Brand does not teach conjugating gastrin 2-17 to human serum albumin to form Z-Y_m-X-Tyr-Gly-Trp-Leu-Asp-Phe-NH_2 (wherein Z is human serum albumin).

Frehel et al. teach the gastrin fragment and analog: gastrin 2-17 [a.k.a., gastrin 2-17(Leu15)] (column 8, lines 59-68 and column 9, lines 1-8), which reads upon the limitation Y_m-X-Tyr-Gly-Trp-Leu-Asp-Phe-NH_2, m is 0, X is Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Glu-Ala.

Frehel et al. does not teach conjugating Y_m-X-Tyr-Gly-Trp-Leu-Asp-Phe-NH_2 to Z wherein Z is human serum albumin to for Z-Y_m-X-Tyr-Gly-Trp-Leu-Asp-Phe-NH_2

Bridon et al. teach conjugating to serum albumin insulinotropic peptides (peptides that stimulate or cause the stimulation of, the synthesis or expression of the hormone insulin) to improve its bio-availability and extend its half-life while maintaining low toxicity and therapeutic advantage (column 4, lines 55-63) and using a wide selection of protective groups and linkers to select the binding site of the albumin, e.g., to attach to the N-terminal end of the peptide (e.g., columns 12-18 and Examples) in the treatment of diabetes. Bridon et al. teach conjugation using a reactive group (such as a thiol) which reacts with amino groups, hydroxyl groups or thiol groups on blood components (such as human serum albumin) to form a stable covalent bond.

Gevas et al. teach using thiol groups of cysteines to form gastrin fragment conjugates with albumin (e.g. Example 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Brand by conjugating the insulinotropic peptide gastrin 2-17 to human serum albumin with a cysteine thiol in the amino terminal side as taught by Bridon et al (e.g., column 1, lines 42-67 and column 2, lines 35-39, claims 1, 11-14) and Gevas et al. (Example 1). The skilled artisan would have been motivated to do so because conjugating it to albumin would improve its bio-availability, and extend its half-life, while maintaining low toxicity and therapeutic advantage (Bridon et al., column 4, lines 55-63). There would have been a reasonable expectation of success, given that this conjugation is effective for a broad group of insulinotropic peptides of similar size than gastrin 17 as taught by Bridon et al. (e.g. Examples and Sequence Listing) and Gevas (e.g., claims, Example 1) and because Bridon et al.

teaches that the selection of protective groups and linkers allows one of skill in the art to select the binding site of such albumin, e.g., to attach to the N-terminal end of the peptide (columns 12-18, Examples). Thus the invention as a whole was clearly prima facie obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

No claim is allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcela M. Cordero Garcia whose telephone number is (571) 272-2939. The examiner can normally be reached on M-Th 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia J. Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marcela M Cordero Garcia, Ph.D.
Patent Examiner
Art Unit 1654

MMCG 10/06

Cecilia J. Tsang

Notice to Comply	Application No. 10/728,082	Applicant(s) Cruz	
	Examiner **M.M. Cordero Garcia**	Art Unit 1654	

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).

☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).

☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).

☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).

☒ 7. Other: There are peptides with 4 or more residues without the corresponding SEQ ID NO: in the disclosure and claims (e.g., page 2, lines 26-27, page 39, lines 1-2 and claim 63).

Applicant Must Provide:

☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".

☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.

☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216 or (703) 308-2923
For CRF Submission Help, call (703) 308-4212 or 308-2923
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